



Anti-Citrullinated Peptide Antibodies Tests

1. What are anti-citrullinated peptide antibodies tests? How easy are these to request and how much do they cost?

Question submitted by:
Dr. A. Rajpura
Brantford, Ontario

Citrullination is the process by which the amino acid arginine is converted to citrulline. It is believed that citrullination of proteins has some function in apoptosis, which is programmed cell death. Increased levels of citrullinated proteins are present in inflammation. Antibodies directed towards cyclic citrullinated proteins (anti-CCP) have a specificity for the diagnosis of rheumatoid arthritis (RA) of about 98%, with a sensitivity in the order of 80%, which is similar to that for rheumatoid factor (RF). Anti-CCP antibodies, which may be present years before the onset of RA, are positive in up to 40% of RF sero-negative arthritis and may be helpful in distinguishing

patients with arthralgias who will go on to develop RA. These antibodies have also recently been associated with the erosive progression of RA; therefore, they may become a useful marker to predict severity of disease and enable selection of RA patients for more aggressive treatment strategies. The commercially-available test for anti-CCP uses an artificially-altered molecule in a circular conformation in order to expose as many citrulline residues as possible and is about four to six times the cost of a RF test.

Answered by:
Dr. Mary-Ann Fitzcharles

Side-Effects of Testosterone Treatment

2. Are there any adverse drug reactions to using 300 mg of testosterone enanthate weekly? The patient will not accept a lower dose.

Question submitted by:
Dr. Clayton Reynoldson
Victoria, British Columbia

The usual dose of testosterone for the treatment of hypogonadism is 150 mg to 200 mg intramuscularly (IM) every two weeks. Some patients benefit from taking 100 mg IM every week, or switching to either oral testosterone, the testosterone patch or gel. A weekly (300 mg IM) dose is clearly a supraphysiologic dose. Potential side-effects include polycythemia, worsening of sleep apnea, liver dysfunction, dyslipidemia and

possibly prostatic hyperplasia with or without prostate cancer. I would advise against using this dose. Measurement of a patient's testosterone level eight to 10 days after the previous injection, which will show supraphysiologic levels, may help convince the patient to accept a lower dose.

Answered by:
Dr. Hasnain Khandwala

3.

Long-Term Effects of the Varicella Vaccine

What do you know about the long-term effects of the varicella vaccine? Is the incidence of adult chicken pox increasing or decreasing?

Question submitted by:

Dr. L. Litwinson
Edmonton, Alberta

The varicella vaccine has been very successful in preventing clinical varicella in children, especially severe varicella. Like all vaccines, it is < 100% effective and its effectiveness probably wanes with time after vaccination. The initial single dose regimen had breakthrough rates close to 10%, leading to the recommendation for a two-dose regimen. Over the past decade, varicella incidence has decreased in all age groups. This includes adults who were never vaccinated, presumably secondary to fewer infectious children among the population. However, the decrease in varicella rates was more striking among children, leading to an increase in the relative percentage of cases occurring in adults. As of yet, we do not know what will happen to infection rates as this large population of children with vaccine-induced immunity and little exposure to wild-type virus ages. It is possible that further booster doses may be required.

Answered by:

Dr. Michael Libman



PREVACID (lansoprazole delayed-release capsules) and **PREVACID FasTAB** (lansoprazole delayed-release tablets) are indicated in the treatment of conditions where a reduction of gastric acid secretion is required, such as:

Erosive and non-erosive GERD in children aged 1 to 17 years.

The clinical trial treatment period did not extend beyond 12 weeks.

PREVACID[®] FasTAB
LANSOPRAZOLE DELAYED-RELEASE TABLETS



PRODUCT MONOGRAPH AVAILABLE UPON REQUEST.



Chest Pain in Adolescents

4.

When teenagers have chest wall pain, what investigations should be done?

Question submitted by:
Dr. K. Emmott
Comox, British Columbia

Chest pain in adolescents is a common complaint. Although it is often benign, it frequently causes considerable anxiety and school absences. Most patients with chest pain have normal physical examinations or findings consistent with a musculoskeletal etiology. Further investigations are not needed in those cases. The following diagnostic studies may help to establish a diagnosis in patients with abnormal physical findings or with associated symptoms that suggest organic disease:

- **Chest radiograph** can identify:
 - cardiac enlargement,
 - pulmonary hypertension,
 - pulmonary infiltrates,
 - pneumothorax,
 - pneumomediastinum and
 - pleural effusions.

Occasionally, foreign bodies may be present

- **Electrocardiogram (ECG) and Holter monitoring** can identify the type of arrhythmia. A resting ECG identifies left ventricular or right ventricular strain. Formal exercise

tolerance testing may be needed to assess the development of arrhythmia or ischemia during exertion

- **Echocardiogram** can identify structural abnormalities and help assess severity
- **GI evaluation** is helpful in children with chest pain and GI symptoms should be referred to a pediatric gastroenterologist
- **Further evaluation** may include pulmonary function testing in patients with respiratory disorders, or a ventilation-perfusion scan to confirm the diagnosis of pulmonary embolism. Cardiac catheterization can evaluate coronary arteries or arrhythmia

Answered by:

Dr. Chi-Ming Chow

Although chest pain in adolescents is often benign, it frequently causes considerable anxiety and school absences.

5.

Corticosteroid Use in Children

Please review the use of steroids in croup and asthma in children less than eight years old and greater than six months.

Question submitted by:
Dr. Monique Moreau
 Alliston, Ontario

There has been a dramatic change in attitudes about corticosteroid use in children over the past two decades and corticosteroids are now commonly used in the care of infants and children with airway problems that are mediated, at least in part, by inflammation. The sentinel studies of Klassen, *et al* have established that the use of corticosteroids early in the course of croup reduce the severity and duration of croup, as well as the risk for hospitalization. The usual corticosteroid used is dexamethasone, with a single dose of between 0.15 mg/kg to 0.6 mg/kg being given once to the child presenting with croup. In my practice, I use a dose of 0.3 mg/kg.

Corticosteroids are also commonly used for the therapy of acute exacerbations of asthma, most commonly being given orally in a dose of 1 mg/kg of prednisone or prednisolone. It is usual to treat the child for a five day course, giving the corticosteroid once a day. When chronic therapy is needed, this should be done via aerosol, using one of the many corticosteroid preparations available by metered dose inhaler formats ("puffer").

Answered by:
Dr. Michael Rieder



PREVACID (lansoprazole delayed-release capsules) and **PREVACID FasTAB** (lansoprazole delayed-release tablets) are indicated in the treatment of conditions where a reduction of gastric acid secretion is required, such as: Symptomatic Gastroesophageal Reflux Disease (sGERD); treatment of heartburn and other symptoms associated with GERD.

CONSULT PRODUCT MONOGRAPH FOR A COMPLETE LISTING OF PREVACID INDICATIONS.



PRODUCT MONOGRAPH AVAILABLE UPON REQUEST.



Treatment for an Unconscious Patient with Liver Failure

6. I have a patient with cirrhosis and liver failure. He is unconscious. How can we manage?

Question submitted by:
Dr. Samy Younan
Burnaby, British Columbia

Patients with end-stage liver disease are at risk for hepatic encephalopathy. This disorder is a spectrum of neurological and psychiatric abnormalities found in patients with liver dysfunction. In a patient who has liver disease and is unconscious, other etiologies (e.g., infectious, metabolic, intracranial, medication-induced, toxin ingestion, etc.) must be excluded.

The mainstay of treatment of hepatic encephalopathy is lactulose. It can be initially prescribed at 30 ml p.o. q.d. or b.i.d. The dose should be titrated so that patients have two to four loose

stools per day. Noncompliance with this is a major reason for patient relapse. In patients who cannot take this orally, such as yours, high doses of lactulose (e.g., 30 ml q.2.h. to q.4.h.) may be administered by nasogastric tube. Lactulose may be administered as a retention enema (300 ml lactulose and 700 ml of water) to patients who are comatose. Antibiotics, such as metronidazole and neomycin, can be considered in patients who respond partially to lactulose.

Answered by:
Dr. Jerry McGrath

Pseudofolliculitis Barbae

7. How should you treat pseudofolliculitis barbae? I have a patient with curly hair who cannot shave because of ingrown hairs. What do you suggest?

Question submitted by:
Dr. M. Goldie
Calgary, Alberta

Pseudofolliculitis barbae is a common disorder where inflammatory and pustular lesions develop in the facial shaving area, usually in males, often leaving papules or nodules. Attempts at shaving usually meet with further aggravation. Generally, the etiology is hairs that curl in and pierce the skin—or sometimes grow directly into the side of the follicle before emerging from the follicular orifice. Treatment is unsatisfactory. There is some benefit from stopping shaving (i.e., growing a beard). Mild peeling techniques, such as topical retinoids can help.

Topical steroids can reduce inflammation. Patients can be helped by ensuring that shaving is as atraumatic as possible—sharp blades or sometimes electric razors. Response is very individual so the physician has to be prepared to tailor the approach to each case and to warn the patient that there is a great deal of “trial and error” in treating this condition.

Answered by:
Dr. Scott Murray

There's more to HPV than cervical cancer.

GARDASIL®. Designed to help protect against infection from HPV types 6, 11, 16, 18 and...



GARDASIL® is a vaccine indicated in girls and women 9-26 years of age for the prevention of infection caused by the Human Papillomavirus (HPV) types 6, 11, 16, and 18 and the following diseases associated with these HPV types: cervical, vulvar, and vaginal cancers, genital warts, cervical adenocarcinoma *in situ* (AIS), cervical intraepithelial neoplasia (CIN) grades 1, 2 and 3, and vulvar and vaginal intraepithelial neoplasia (VIN/VaIN) grades 2 and 3.

The most commonly reported vaccine-related injection-site adverse experiences in clinical trials with GARDASIL® in females (n=5,088), aluminum-containing placebo (n=3,470) and saline placebo (n=320), respectively, were pain (83.9%, 75.4%, 48.6%), swelling (25.4%, 15.8%, 7.3%), erythema (24.6%, 18.4%, 12.1%) and pruritus (3.1%, 2.8%, 0.6%). The most commonly reported vaccine-related systemic adverse experience in females was fever: 10.3% for GARDASIL® (n=5,088) vs 8.6% for aluminum and non-aluminum containing placebo (n=3,790).

Please visit our website at:
www.merckfrosst.com

 **MERCK FROSST**
Discovering today
for a better tomorrow.

Merck Frosst Canada Ltd., Kirkland, Quebec



8.

Shellfish Allergies

Do all shellfish allergy patients require an epinephrine injection?

Question submitted by:

Dr. Michael Keating

Saint John, New Brunswick

Allergies to peanuts, tree nuts and shellfish tend to be lifelong. Consequently, a person with allergies to these foods must take careful measures to avoid accidental exposures to them. Trace exposures and exposures via cross-contamination are often sufficient to trigger allergic reactions. Allergic reactions to these three foods are responsible for the majority of severe food-induced anaphylactic reactions.

The two types of shellfish are:

- crustaceans (shrimp, lobster, crab) and
- mollusk (oyster, clam, mussel, squid, scallop).

Patients often exhibit cross-reactivity between these families of shellfish. As with other food allergies, reactions to shellfish can range from mild through to severe, including life-threatening and fatal anaphylaxis. Assessment of risk includes a detailed history of previous reactions, a history of co-morbid conditions, such as asthma, heart disease and atopic dermatitis, as well as a history of medications used which can intensify allergic reactions to foods, including β -blockers, ASA and NSAIDs.

Risk reduction measures include education on avoidance strategies, modification of co-morbid conditions and development of an action plan. For those patients deemed to be at risk for severe anaphylaxis (*i.e.*, those with potential respiratory tract or CV involvement, or those with rapidly progressive reactions), an epinephrine auto-injector must be prescribed, with thorough training on how and when to use the device.

Answered by:

Dr. Peter Vadas

9.

Scalp Fungal Infections

How should you to treat *Trichophyton tonsurans* on a fungal scrape of a scalp rash in a child?

Question submitted by:
Dr. Laura McConnell
Mississauga, Ontario

Scalp fungal infections invariably involve the follicle and the hair shaft. That is why oral therapy is needed to adequately clear the infection. We tend to use oral terbinafine for one month. With the more aggressive animal-based fungus infections, such as *Microsporum canis*, a more prolonged course is sometimes needed. The classic indicated treatment of oral griseofulvin is not as effective and although the use of terbinafine in pediatrics is still "off label", we often have no choice as griseofulvin is increasingly difficult to obtain.

cme

Answered by:
Dr. Scott Murray

Scalp fungal infections invariably involve the follicle and the hair shaft. That is why oral therapy is needed to adequately clear the infection.

...the diseases they cause:

Cervical cancer and genital warts and cervical dysplasia and vaginal cancer and vulvar cancer



This vaccine is not intended to be used for treatment of active genital warts; cervical, vulvar, or vaginal cancers; CIN, VIN, or VaIN.

This vaccine will not protect against diseases that are not caused by HPV. Pregnancy should be avoided during the vaccination regimen for GARDASIL®. As for any vaccine, vaccination with GARDASIL® may not result in protection in all vaccine recipients.

* NACI recommends GARDASIL® for females 9 to 13 years of age, as this is generally before the onset of sexual intercourse **and** females 14 to 26 years of age even if they are already sexually active, have had previous Pap abnormalities, cervical cancer, genital warts or HPV infection.

PLEASE CONSULT THE ENCLOSED PRESCRIBING INFORMATION FOR INDICATIONS, CONTRAINDICATIONS, WARNINGS, PRECAUTIONS AND DOSING GUIDELINES.

©Registered Trademark of Merck & Co., Inc. Used under license.



GARDASIL®
[Quadrivalent Human Papillomavirus
(Types 6, 11, 16, 18) Recombinant Vaccine]

HPV-08-CDN-84140464a-JA



See prescribing summary and study parameters on page 96